Listing of the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1 – 65. (Canceled)

66. (Currently amended)   A computer program product for use with a computer system, said computer program product comprising:

a computer usable medium having computer readable program code means embodied in said medium for causing the computer system to control the continuous preparation of medium from concentrated solutions, said computer readable program code means comprising:

computer readable program code means for enabling the computer system to control a flow of a diluent into a static mixing chamber, wherein said static mixing chamber provides a turbulent diluent stream in accordance with said flow;

computer readable program code means for enabling the computer system to control a flow of a plurality of chemically incompatible concentrate solutions into said static mixing chamber, wherein said plurality of concentrate solutions admix with said turbulent diluent stream in such a manner that none of the ingredients of the concentrate solutions adversely chemically react with each other to thereby form a diluted mixture of said concentrate solutions; and

computer readable program code means for enabling the computer system to monitor a pH level of said diluted mixture using at least one pH sensor located downstream of said static mixing chamber.

67.   (Previously presented)   The computer program product of claim 66, further comprising:

computer readable program code means for enabling the computer system to monitor a flow of said diluted mixture out of said static mixing chamber, as measured by a flow sensor.

68.   (Previously presented)   The computer program product of claim 67, further comprising:

computer readable program code means for enabling the computer system to adjust the flow of said diluent and the flow of said plurality of concentrate solutions based on the flow of said diluted mixture.

69.   (Previously presented)   The computer program product of claim 66, further comprising:

computer readable program code means for enabling the computer system to monitor a level of said diluted mixture in a medium surge tank; and

computer readable program code means for enabling the computer system to adjust the flow of said diluted mixture into said medium surge tank.

70.   (Previously presented)   The computer program product of claim 69, wherein said computer readable program code means for enabling the computer system to adjust the flow of said diluted mixture into said medium surge tank comprises:

computer readable program code means for enabling the computer system to adjust the flow of said diluent into said static mixing chamber; and

computer readable program code means for enabling the computer system to adjust the flow of said plurality of concentrate solutions into said static mixing chamber.

71. (Previously presented) The computer program product of claim 66, further comprising:

computer readable program code means for enabling the computer system to monitor a parameter of said diluted mixture using a sensor located downstream from said static mixing chamber to determine whether said diluted mixture is acceptable.

72. (Previously presented) The computer program product of claim 71, further comprising:

computer readable program code means for enabling the computer system to control a diverter valve that directs said diluted mixture based on whether said diluted mixture is acceptable.

73. (Canceled)

74. (Currently amended) The computer program product of claim 66 73, further comprising:

computer readable program code means for enabling the computer system to adjust a pH level of said diluted mixture.

75. (Previously presented) The computer program product of claim 74, wherein said computer readable program code means for enabling the computer system to adjust a pH level of said diluted mixture comprises:

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computer readable program code means for enabling the computer system to adjust a flow of an acid solution into said static mixing chamber to thereby adjust the pH level of said diluted mixture.

76. (Previously presented) The computer program product of claim 74, wherein said computer readable program code means for enabling the computer system to adjust a pH level of said diluted mixture comprises:

computer readable program code means for enabling the computer system to adjust a flow of a caustic solution into said static mixing chamber to thereby adjust the pH level of said diluent stream.

77. (Previously presented) The computer program product of claim 74, wherein said computer readable program code means for enabling the computer system to adjust a pH level of said diluted mixture comprises:

computer readable program code means for enabling the computer system to adjust a flow of an acid solution into said static mixing chamber; and

computer readable program code means for enabling the computer system to adjust a flow of a caustic solution into said static mixing chamber.

78. (Previously presented) The computer program product of claim 70, wherein said computer readable program code means for enabling the computer system to adjust the flow of said plurality of concentrate solutions into said static mixing chamber comprises:

computer readable program code means for enabling the computer system to adjust a flow rate of an acid soluble concentrate solution into said static mixing chamber.

79.   (Previously presented)   The computer program product of claim 70, wherein said computer readable program code means for enabling the computer system to adjust the flow of said plurality of concentrate solutions into said static mixing chamber comprises:

computer readable program code means for enabling the computer system to adjust a flow of a group I salt concentrate solution into said static mixing chamber.

80.   (Previously presented)   The computer program product of claim 70, wherein said computer readable program code means for enabling the computer system to adjust the flow of said plurality of concentrate solutions into said static mixing chamber comprises:

computer readable program code means for enabling the computer system to adjust a flow of a group II salt concentrate solution into said static mixing chamber.

81.   (Previously presented)   The computer program product of claim 70, wherein said computer readable program code means for enabling the computer system to adjust the flow of said plurality of concentrate solutions into said static mixing chamber comprises:

computer readable program code means for enabling the computer system to adjust a flow of a base soluble concentrate solution into said static mixing chamber.

82 -83. (Canceled)